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CONTENTS

Freedom, Indeterminacy, and Value: BLANCHARD W. MEANS.... 85

Mr. Collingwood on Philosophical Method: C. J. DUCASSE..... 95

Book Reviews..... 106

TORGNY T. SEGERSTEDT, *The Problem of Knowledge in Scottish Philosophy.*

CHARLES HARTSHORNE and PAUL WEISS, *editors, Collected Papers of Charles Sanders Peirce, Volume VI.*

HORACE M. KALLEN and SIDNEY HOOK, *editors, American Philosophy Today and Tomorrow.*

Other New Books and Journals..... 110

Notes and News..... 112

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THE JOURNAL OF PHILOSOPHY

FREEDOM, INDETERMINACY, AND VALUE

THE PROBLEM of human freedom, always intensely interesting, is especially so now in the changing attitude which has arisen in science due to an indeterminism discovered in its basic descriptions. In this present scientific indeterminism there appear anew certain significant suggestions concerning freedom. Thus in his recent book, *New Pathways in Science,* Sir Arthur Eddington clearly explains how modern science is no longer based on even an implicit assumption of universal causality, and thus how it no longer affords a basis for the philosophy of determinism. Sir Arthur is not so clear, however, that indeterminism does not of itself lead to that freedom of the will which he combines with this new situation in modern science. I would point out that indeterminism as such not only does not, but can not, lead to freedom of the will, and further that our own immediate evidence of freedom goes directly to limit the reality of any ultimate indeterminacy underlying the modern statistical character of science.

This new character of science is founded upon the prediction of probabilities. While, as Eddington says,[1] the common every-day association of cause and effect is a matter of ordinary experience, the classical laws of mechanics and of electromagnetism are found to be, not certain statements of a universal causality, but predictions, although concerned indeed with a very large number of individuals and consequently having a high degree of probability amounting almost to certainty. Classical laws of science thus owe their apparent certainty to their gross probability rather than to any underlying causality. Science is consequently no longer trying to work out a scheme of law which will tell us definitely what is going to take place in the future on the basis of the past-present, but is essentially concerned with a system that predicts what probably will happen. This system is found to be a mathematical statement of behavior, based upon statistics and averages. As such it symbolizes the activity of things without defining the ultimate reality of the things whose behavior is symbolized. Modern science is thus in its new character a mathematical symbolization of probability behavior.

[1] *New Pathways in Science,* p. 74.

There are, I think, at least three metaphysical interpretations of this new character of science which have direct bearing upon the freedom of the will.

1. *Determinism.* Science has turned to probability to compensate for an ignorance of minute details which makes certain prediction at present impossible. It may be that such ignorance will later be cleared away. Or perhaps it must forever be accepted due to the interference of our observations with the actual entities observed, as when we try to discover the exact future of an electron only to find that as we locate its present position our observations affect its velocity, and vice versa, apparently putting exact prediction beyond human reach. In either case, however, we can assume, and it is said by some, must accept, as a basis for explanation an underlying, strict causality in the real, through which the present is ever the work of the past.[2]

2. *Indeterminism.* The statistical character of modern science concerning the behavior of things is simply the symbolization of the activity of things which are themselves in their reality undetermined. The present and future consequently do not depend on the past, and probability is thus the essential nature of events.

3. *Partial-indeterminism.* Scientific prediction based as it is upon mathematical probability within a given situation of knowledge suggests a certain limiting of otherwise statistical behavior. Perhaps the underlying reality of present events is partly determined and partly undetermined by the past.

These three interpretations of scientific probability may be more exactly defined as the following three metaphysical positions. 1. Determinism, which means that for each and every event there is at any and all times in the past a set of propositions which taken together entail the happening of a given event at the place and time at which it happened, whether or not anyone knows or ever can know such a set of propositions. 2. Indeterminism, which means that for each and every event there is no such set of entailing propositions, whether or not anyone believes that there is. 3. Partial-indeterminism, which means (*a*) that for certain events there is a set of true propositions entailing that these events happen at the place and time at which they happened, while for other events there is no such set of propositions, or (*b*) that for any given event certain of its compositional characters may be fully determined, as just defined, while one or more other compositional characters may be undetermined, as defined, with the result that the given event is partly determined and partly undetermined. Considering events

[2] Planck and Einstein especially hold to the principle of universal causality. See Planck, *Where Is Science Going?* pp. 143, 145, 210, 221.

more inclusively, alternatives (*a*) and (*b*) above mean essentially the same thing, i.e., that in the universe at large certain characteristics of its happenings are previously determined in space and time while others are undetermined until their appearance.[3]

These three positions exhaust, I think, the immediate interpretations of scientific probability. Of these the first two, I suggest, equally exclude freedom, while the third points directly to a valuational factor in reality.

That a metaphysical determinism cuts out all freedom is not open to argument. If it is true that,

> ". . . the First Morning of Creation wrote
> What the Last Dawn of Reckoning shall read,"[4]

then there is not only no possibility of personally responsible action,[5] but the whole idea of truth-seeking itself becomes contradictory and absurd. If all my actions are fully determined I have no responsibility for them. "Must" has no meaning apart from "can." And if, due to a universal causality, I necessarily affirm necessity my assertion itself is irrational and truthless. The reason why in spite of this thinking people, with their undoubted experience of conscious preference and truth-seeking desire, still cling to the idea of

[3] Cf. Broad's definitions in his *Determinism, Indeterminism, and Libertarianism*, pp. 28–34. Compare also, Eddington, *op. cit.*, pp. 75–76.

[4] Quoted by Eddington as the best definition of determinism, *op. cit.*, p. 75.

[5] In his book, *Where Is Science Going?* Max Planck, while holding to the basic principle of universal causality and yet deprecating the modern tendency to dodge responsibility in terms of determinism (pp. 158–159), offers an interpretation of freedom which I find confusing. Observation and scientific investigation generally, he says in effect, are necessarily in terms of strict causal relations. But there is one point in the universe not open to scientific method. This single point is one's own Ego, which can not be observed by others, and which can not be immediately observed by the self because in practice no one can be both the "observing subject" and the "object of research." Here then, and here alone, there is direct and immediate personal, i.e., ego, freedom (pp. 161–163).

If Planck means by this simply that at the time of acting we can not observe the operation of the past in determining our behavior, although a superintelligence, and we ourselves at a later time could do so (pp. 163–164), then our freedom is after all merely an illusion due to this practical inability both to do and to observe the action in the doing.

But if he means that the causal principle itself is simply the observer's way of describing what in its immediacy we knew to be our own originative or creative responsibility (p. 165), then the principle of causality is not exclusively ultimate, and determinism must be broadened to include personal or spiritual control in events. This is in accord with my own inclination as I try to show. But because clearly contradictory to his fundamental principle of physical causality I do not really believe that it is Planck's, in spite of his rather ambiguous phrasing and obvious desire to save the dignity of man.

universal causality is, I suggest, largely their actual or implicit recognition of the even greater irrationality of determinism's opposite, indeterminism—either complete or partial.

Although many people during the past several years have enthusiastically welcomed the new indeterminism of science as freedom of the will, a little reflection clearly reveals the self-contradictoriness of real indeterminacy for human freedom. Real indeterminism means that the present is uncontrolled by the past. It is not that it is due to pre-existing causes. This makes the happenings of the world episodic, for the present here and now is ever a new creation. Thus, because purposive attainment is possible only through the control by the present-past over the future, in a really indeterminate world any actual achievement becomes a matter of accident or happy coincidence. Everyone of courage is willing to take a chance, to strive in the face of possible failure, to act upon probability. But such effort presupposes some connection in reality. A world of undetermined events, such as the fairy-worlds of story where the gallant knight fights for the honor of his lady only to find her an old hag or bodiless-voice upon his victory, is a discouraging, and ultimately unintelligible world—even if the probabilities are so high as to make the indeterminism in practice one only of theory.[6]

The same result is even more crucial in its destruction of personality. A reality which is indeterminate, necessarily including man as a part of reality, makes of him not a personality but a disconnected, physical collection of the moment. Freedom of the will implies freedom in some sense of a will expressive as an ego, as a personality which endures at least in and through changing events. Real indeterminism makes of the present merely a name for ever new situations, for the events as they actually appear, thus reducing man from an organic, integrative process to a meaningless series of discrete actions as they happen to turn up, entirely free from any interconnection except as a temporal sequence of accidental events. In such a reality both self and freedom become meaningless. In-

[6] Broad in his discussion of indeterminism remarks, *op. cit.*, p. 30, that the statement of indeterminism is intelligible whether true or not. I am inclined to disagree. The statement of indeterminism, either partial or complete, if believed to be true means that the statement itself is either necessarily determined in part and for the rest a matter of chance or that it is entirely a matter of accident, and thus as a statement of truth it is unintelligible. But if the statement is made while believing it false the statement describes a certain situation which is possible, and thus as false understandable. That is, the statement of indeterminism, or of determininism for that matter, is intelligible but the assertion of the statement is not intelligible. This is the same as saying that a determinate or indeterminate world is one in which man loses his distinctive rationality and is therefore unintelligible as an assertion of reality.

determinism, far from being the guarantee of freedom, is the contradiction of it.

As for partial-indeterminism, the third interpretation of the new indeterminacy in science, taken at its face value, is no better for freedom than either of the other two. If events are partly determined and partly undetermined the theoretical chaos of complete indeterminism is reduced, but so also is the possible opening for freedom. Determinism excludes freedom and indeterminism contradicts it, whether either one of these is considered as exclusively the real or both are taken together as sharing in the real.

But if we examine further this situation, outwardly so hopeless for freedom, the suggestion appears that neither determinism nor its opposite, indeterminism, or any mere combination of the two, is to be taken as final. Modern science, as Eddington clearly explains, is symbolic and interpretative. It represents the behavior of things, but does not give their final reality. Thus modern science is no evidence to prove real determinism, and equally it is no exact disproof. That is, it does not prove indeterminism. In its symbolical interpretation of the behavior of things there is found indeed definite indeterminacy within certain determinate limits, such at least as the given knowledge of present situations on which the mathematics of scientific probability are based. But this does not affect the fundamental fact that science proves nothing as to the causality or indeterminacy of ultimate reality.[7]

On the other hand we have direct evidence of personality, especially in our experiencing responsibility as a continuous or progressive striving toward good in all the varied happenings and events of living. This purposive experience is intelligible only on the assumption that we as integrative experiencers are doing something in the real world. Such self-responsible activity is direct evidence against the metaphysical interpretation of scientific indeterminateness as either an underlying universal causality or an ultimate indeterminism. Because, as I have tried to show, either such interpretation is destructive of it, our experience as personality, considered in connection with the interpretative and symbolic character of modern science, points to real freedom in a universe at least partly undetermined by the past and yet not really indeterminate. This conclusion goes beyond the position of partial-indeterminism, already discussed, in its interpretation of the undetermined. Our undoubted preference-purposive-experiencing requires a world at least partly related to the past for any achievement in the future. But such relation to the past can not be a

[7] Planck and Einstein, as well as Eddington, assert this conclusion. Eddington, *op. cit.*, pp. 74, 85–87, etc. Planck, *op. cit.*, pp. 112, 140, 210, etc.

complete determinism or there is no opening at all for purposive effort. Yet for man at least any indeterminism, such as that found by science, which frees him from the past and opens the future for his endeavor can not be such as to reduce his striving activity to a matter of mere accident. His striving is either controlled by the values involved or it is irrational and his freedom from domination by the past is no freedom but merely chance. Thus for man indeterminism is rationally the opening for values. I suggest, therefore, that the reality which science interprets and symbolizes in its mathematical probabilities in the case of human individuals at least appears as mind, personality, or spirit behind the seeming indeterminateness of basic physical behavior.

How far such "spiritual" control may be predicted of the physical universe I hestitate even to suggest. But since no-control, or ultimate indeterminateness, is hopelessly destructive, not only of personal values, but of all objective science as well, and equally since a universe of physical causation is intellectually inacceptable because self-defeating in its scientific, as well as all other, effort to know and to do, we are led beyond the realm of human responsibility to the idea of non-physical or rational control in the universe at large. While I agree with Sir Arthur Eddington [8] that the picture of free-will or personal purpose in the particular atoms is an unwarranted fancy not a little absurd, I can not avoid this suggestion of a cosmical value-factor in the determination of events. Controlled they must be, but controlled "spiritually" for rationality. Thus the apparent indeterminism and consequent uncertainty found by science may express neither our relative ignorance of "physical causes" nor an ultimate chance but rather non-physical or spiritual control in "physical" events. That is, this determination found in science's ultimate descriptions may mark the limit of our purely physical abstraction and require for further certain prediction that we must include also the axiological aspect of experience. Admittedly we may be hopelessly ignorant of the values for such an aspect of physical events as dealt with by physics, but we at least know something of them in our own immediate experiencing, and perhaps in our interpretation of our social relations with others. Thus if the indeterminism discovered in the universe at large should stand for such a non-physical or axiological control in a cosmic sense, the symbols that represent this indeterminism in all ultimate equations of science would in reality be symbols for value as the expression of what we can call mind or spirit. If so, absolute predictability would demand a knowledge of this value-factor, and the physical universe would have to be interpreted ultimately in spiritual terms.

[8] *Op. cit.*, p. 86.

If it is objected that cosmic values and spiritual predictability are just as destructive of human freedom as is the strict determination of universal physical causality, I recognize the extreme difficulty of the objection. But I think that in so far as man is free his freedom lies in his ability to follow the best rather than in the absence of all determination. To act, to be determined if you like, by motives of value constitutes the rational activity of man. This the idealistic tradition has emphasized down through the ages.

Surely freedom is doing what you want, and in doing what you want you are free. Now in so far as man is rational he wants the best, the higher rather than the lower good. That is a principle of rationality itself. If I prefer action *A* to action *B*, you are right to ask why I prefer *A* to *B*. But if you reply that I prefer *A* to *B* because of my inheritance, environment and training, past experience and so on, you are back in a temporal-past determinism which has already been discussed as destructive of both freedom and rationality. It is not an intelligible answer. But if you say that I prefer *A* to *B* because *A* is good or is better than *B* in some objective sense then you are asserting both freedom and rationality. That is, suppose my present situation is both possible and compatible with either *A* or *B* as my next act and that I actually "choose," i.e., perform, *A*, my freedom as a rational being lies in my doing *A* as a value and not in the idea of my being able to have done *B* instead of *A*. The intelligibility of my action is my value realized in *A*.

But still you may object that my recognition of *A* as better than *B* depended upon my past, and if that was such that I could not know *A* to be the better (or could not help knowing it), I am neither free nor responsible. Thus suppose a man, *X*, considers action *A* better than action *B* and so performs *A*. Is *X* free? No, you say, since his recognition of *A* as better than *B* was due to his inheritance, training, and so on, although he could have chosen *B* if his past had been such as to lead to his recognition of *B* as the "better." The ditch-digger prefers beef to Bach, although had his inherited ability been different he could have chosen to starve rather than surrender his music. "Could" as the word of freedom and responsibility means if conditions in the past had been different from what they in fact were. But this, as Broad[9] asserts, reduces freedom to a chain of endless "would have ifs," that is, to determinism, and your objection stands.

I do not think, however, that "could" for freedom need mean either an absolute indetermination before an act, which is irrational, or an endlessly retrogressive conditionalism, which is de-

[9] *Op. cit.*, pp. 20 ff.

terminism. There is a third meaning which is that in so far as I could have known better, although in fact I do not, I am free in doing the act which I consider the better value. Thus suppose *X* to prefer *A* to *B* (considers *A* the better or higher value), although in *B* actually he would realize the greater value. If *X* had in the past no way of learning this he is admittedly not free, and in practice we do not critically condemn such cases. But if he could have known better, although he did not, he is free, and ignorance is then and then only no excuse. But if he could have known better, why did he not? Because at the time for such learning he preferred some other act, e.g., fishing rather than going to school so that now he knows no better than to prefer the "movies" to good literature. But why did he prefer fishing to school? Is this not merely the same deterministic retrogression? No, because as time goes on, sooner or later, experience teaches him his error, e.g., when his employer's daughter spurns his love because of his "low-brow" taste. That is, man in living learns. And in his ability to discover the order of values man finds his freedom. His original condition taken in conjunction with the environmental set-up in which he is placed does not once and for all determine his future. Through experience he is freed from the complete grasp of the deterministic past upon his living.

If you still object that even here man's real self is at the determination of the interplay between his rational desire for good and his educative experience to his consequent new knowledge of good and so on with the result that in this whole process the self is not really free, I reply that you are confusing self-direction as the desire for good with a self directed by a desire for good. My nature is not something prior to or separate from my acts, but my acts as they go on are my nature. My reality is at least my living, and my living is selective. It is an intrinsically directive experiencing. I am not a self determined by reason. I do not have a desire for good with the consequence that I am determined by good. I am my desire for good, and my living toward good constitutes my freedom.

Throughout this discussion of objections to freedom the idea of value as something more than personal or subjective has been implied, but here it becomes especially evident. The value-seeking character of man, his good-desiring nature points to good or value as super-personal, as in some sense cosmic rather than purely human. Otherwise man creates his own values, which in final analysis reduces his activity to a matter of inner chance or a naturalistic determination, in either case losing rationality. But if the good is in some sense cosmic it is hard to see how man is free from cosmic

control. Yet I find a suggestion in the distinction just made between man as having a desire for good and his essential character as the desire for good. If man's freedom is his intrinsic-direction to the good, although within the world-process, he is not merely part of an identity-destroying unifying cosmic plan or purpose, a universal working out of good, but he is in some sense a co-creator in the on-going of events toward good.

Still to an omniscient being, I suppose, man's actions would be understood, and so be definitely predictable. At least such a being would understand the real good and could thus foretell the process of any particular on-going toward good, provided the completeness of his understanding did not exclude an understanding of the partial-understanding found in man and constituting man's self-direction toward good. That is, man's actions would be predictable provided his restricted view of values and only partial understanding of them, with his consequent errors of value-judgment, were also understood. Error does not seem to me to be an unpredictable or chance quantity, and I should hate to think of man's freedom as bound up with his ability continually to make unforetellable mistakes.

Why if our essential reality is axiological there should be error at all in man's value-desiring remains a puzzle in the wider problem of evil. Perhaps it is the price of individuality among co-creators toward good, the cost of selfhood within universal process, as without some limitation of view and consequent possibility of error man would not only understand, but himself embrace all reality in his understanding. Lest I appear to base if not his freedom at least his self upon error I point out that it is on the limitation of his understanding as his particular view of values where I rest his individuality, not error but finitude. And such limitation, since it implies value for the result or is indeed pointless, suggests the intrinsic value of the individual.

In any case, whether or not a man's acts would be completely predictable to omniscience, I do not think that his freedom is affected. Certain predictability is a matter of correct knowledge. Thus suppose a present action A is compatible with and will be followed by either action B or action C. Then suppose that I have advance information that as a matter of fact C will follow A and so definitely predict C as following A, and C does in fact follow A. Now my information did not bring about C but the reality for which my information was correct. Yet that reality may have been purely a universal physical causality, or chance, or a cosmic design, or a self-direction toward a goal. In any case the information and resultant prediction had nothing to do with the happening. Self-

direction is still self-direction even if you know the goal which I am seeking, and also which of two supposed possibles is in actuality that goal and so are able to "predict" which one I will in fact take. Your knowledge for me may thus be certain while my action is still self-directed or free.

In conclusion it is this self-directive experiencing as man's essential character which I suggest in reply to a further objection to freedom, that any such rational, intrinsic determination as I have considered makes the impossible assertion of an actual event at least partly caused by a non-event.[10] Good, that is, as undetermined by the actual is outside the causal event-series and can thus have no part in causing events, e.g., ideals determining my actions. Now, provided you once make such a sharp distinctive separation of the physical (events) and the axiological (good, ideals, values), I not only admit but assert that you can not bring them together in events supposedly determined by the axiological physically causing the physical. But I think that no such sharp separation should be made, just as our own immediate experience makes no such distinction between the "purely" physical sensations of "things" and our value-feelings in them.[11] Our strictly physical concepts are at best our symbolic interpretations of the real. Purposely designed for the greatest common universality they are too partial and inadequate to symbolize all our experiencing. Our categories of life and mind are more adequate, as Haldane and others have emphasized. Yet matter, life, and mind or spirit, even as arranged in an admitted order of increasing adequacy, when merely taken as ultimates of description are still insufficient as a satisfactory interpretation of experience. Underlying these categories as the measure of their adequacy are the more basic ideas of direction (purpose) and the compliment of direction, good (value).[12] How values then cause material events becomes a mistaken or at least an inadequate question based upon the willful separation of the physical and the valuable. Fundamentally our experience is a value-directive process, a development of the present for the sake of something, or ultimately for its own sake, intrinsic value and final good. Indefinable

[10] Cf. Broad, *op. cit.*, pp. 43–46. Broad's objection here to free-will as a confused theory implying the impossible notion of a non-event, event-determined putting forth of effort by the self on the side of this or that alternative rests upon his own too sharp separation of the self as an entity from the particular instances as coming before the self for choice. Living is, I think, itself selective, and human experiencing is in essence self-directive.

[11] Cf. Chs. Hartshorne, *The Philosophy and Psychology of Sensation*, pp. 7, 19–20, 94–98, etc.

[12] Cf. J. S. Haldane, *The Philosophy of a Biologist*, pp. 27–28, 42, 72–78, 107, 151–154, etc.

as such value-process may be in the last analysis, it is, I suggest, both the meaning of man's freedom and the essence of his experiencing rationality.

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MR. COLLINGWOOD ON PHILOSOPHICAL METHOD

IN HIS recent volume, *Philosophical Method*,[1] Mr. R. G. Collingwood points out that although the problem of philosophical method has been discussed by philosophers from the earliest times, it is of peculiar importance today and is attracting widespread interest. His own attempt to deal with it is noteworthy for its high literary quality, its elaborateness, and its systematic character. Because of the impressiveness that these qualities lend it as well as on account of the importance of the problem with which it deals, it seems to the present writer important to set forth the reasons for his own belief, not only that Mr. Collingwood wholly fails to establish any of the premises upon which he bases his methodological conclusions, but that each of these premises is demonstrably false; and that, since the argument from which he draws his methodological precepts is itself written faithfully in accordance with them, the unsoundness of that argument is eloquent *a posteriori* evidence of the unsoundness of the precepts.

Mr. Collingwood attempts to define for philosophy a mode of procedure, distinct from that of science, and alleged to be grounded in the very nature of philosophical concepts. An understanding of this mode of procedure is asserted by him to vindicate philosophy from the charges of looseness and confusion to which, as compared with science, it otherwise seems so generally open. Before examining that mode of procedure, let us briefly note the nature of the supposed vindication. It is set forth in the following passage: "To a person who does not understand what philosophy is, or by what processes it moves, the history of those sixty generations [of European philosophical thought] appears as a chaos, ... But this appearance of irrationality, I make bold to say, can not survive the discovery that philosophical thought has a structure of its own, and the hypothesis that in its changes it is obeying the laws of that structure."[2]

Now, even without agreeing with Mr. Collingwood that philosophical tradition (except on the assumption he puts forward) is "only

[1] Oxford University Press, 1933.
[2] *Op. cit.*, p. 224.

a chaos of discordant ravings,"[3] one may nevertheless insist that ravings may well be systematic without ceasing to be ravings. To discover that the thought of the insane has (to apply to it the words he applies to that of philosophers), "a structure of its own, and . . . that in its changes it is obeying the laws of that structure," is not to discover that it is after all not insane thought, but only to discover the laws of the psychology of the insane. Even assuming, therefore, that philosophers have typically thought in the way Mr. Collingwood describes, no light is thrown thereby on the merits of that way of thinking. What a certain process is, and whether the results it produces are good, are distinct questions. Mr. Collingwood's "vindication" of traditional philosophy in effect consists in telling us that the philosophical pudding tastes very bad—unless one knows the recipe by which it was cooked! That the taste of the pudding is on the contrary what decides the merits of the recipe, is implicitly admitted by him when he asks in the end whether we are willing to believe "that in sixty generations of continuous thought, philosophers have been exerting themselves wholly in vain."[4]

Although Mr. Collingwood's pages are throughout haunted by the assumption that the question *quid facti* somehow decides the question *quid juris,* much the major portion of his essay consists of an attempt to show that, where philosophical concepts are concerned, the manner in which he alleges that philosophers have typically thought is also the manner essentially right. First, and fundamental to his whole argument, is the contention that whereas, in scientific concepts, the species of a genus are mutually exclusive, in philosophy they on the contrary overlap. He further contends that the species of a philosophical genus constitute a "scale of forms," a scale of forms being what one has whenever differences in degree are combined with differences of kind. For example, differences in the degree of heat of H_2O are accompanied, at certain critical points, by the several kinds of things called ice, water, steam. In philosophical as distinguished from any such scientific scales of forms, however, the differences of degree are, he contends, essentially unmeasurable because they are, not simply correlated with, but identical with, differences of kind: every increase, for instance, in heat as we feel it is, he asserts, also a change in the kind of feeling we experience, "from a faint warmth through a decided warmth it passes to a definite heat, first pleasant, then dully painful, then sharply painful. . . . I can detect as many differences in kind as I can detect differences in degree; and these are not two sets of differences but one single set. . . . In a philosophical scale there is only one set of

[3] *Op. cit.,* p. 225.
[4] *Op. cit.,* p. 225.

differences having this peculiar double character" viz., degree and kind.[5] This itself is due, he asserts, to the fact that "differences in degree and differences in kind are two species of the genus difference, and [that] in the case of philosophical concepts they must accordingly overlap to form a type of difference partaking of the nature of both . . . : a difference in degree, but not measurable, and a difference in kind, but not susceptible of arrangement in ungraded species; a difference, that is, between various forms in which the generic essence is embodied, which is also a difference in the degree to which these forms embody it."[6] In philosophical scales of forms, moreover, the two species of relations called distinction and opposition are (again because of the overlapping of philosophical species) asserted by Mr. Collingwood to be fused into a single relation. Opposition, in non-philosophical concepts, "is a relation subsisting between a positive term and its own mere negation or absence. Cold, as understood by the physicist, is the lack of heat. . . . But cold as we feel it is not mere lack of heat as we feel it, but another feeling with a positive character of its own; yet these are not two distinct feelings merely, but two opposite feelings."[7]

From such premises Mr. Collingwood draws his methodological conclusions: Because in philosophy "the species of a genus are not mutually exclusive, no concept can ever come to us as an absolute novelty; we can only come to know better what to some extent we knew already. We therefore never need an absolutely new word for an absolutely new thing. But we do constantly need relatively new words for relatively new things. This demand can not be satisfied by technical terms."[8] On the contrary, technical terms, which Mr. Collingwood claims are subjects of verbal as distinct from real definition, thwart that demand because of their rigidity and artificiality. "In order to satisfy it, a vocabulary needs two things: groups of words nearly but not quite synonymous, differentiated by shades of meaning which for some purposes can be ignored and for others become important; and single words which, without being definitely equivocal, have various senses distinguished according to the ways in which they are used."[9] Formal definitions, accordingly, are taboo in philosophy: "Wherever a philosopher uses a term requiring formal definition . . . the intrusion of a non-literary element into his language corresponds with the intrusion of a non-philosophical element into his thought. . . . The duty of the phil-

[5] *Op. cit.*, pp. 72, 73.
[6] *Op. cit.*, p. 74.
[7] *Op. cit.*, p. 75.
[8] *Op. cit.*, pp. 205–206.
[9] *Op. cit.*, p. 206.

osopher as a writer is therefore to avoid the technical vocabulary proper to science, and to choose his words according to the rules of literature. His terminology must have that expressiveness, that flexibility, that dependence upon context, which are the hall-marks of a literary use of words as opposed to a technical use of symbols." [10]

Let us now examine first of all the contention, upon which Mr. Collingwood founds his argument at every point, that in the case of philosophical concepts the species of a genus overlap. It is not possible here to consider all the examples he adduces in the effort to establish it. One or two will serve as a sample of the rest and will show how precarious is philosophizing that proceeds on the doctrine that precision, because it introduces technicality, is a philosophical sin. Mr. Collingwood writes: "Logic distinguishes within the genus thought two species, judgment or proposition and inference. These, as subject-matter of separate parts of logical treatises, seem at first sight to be related much as the triangle and the circle are related in elementary geometry; and in that case they would, like the triangle and the circle, be mutually exclusive classes. But they are not mutually exclusive. That it is raining is a judgment; that it is raining because I can hear it is an inference. Of these two statements one includes the other; and it is therefore clear that the specific classes overlap: a judgment may also be an inference, an inference may also be a judgment." [11]

Now, one might well question whether the transition called inference, from one "judgment" to another, is itself "judgment." Fortunately, however, we need not go at all into the matter, for the only essential point to notice is that even if Mr. Collingwood should be able to show that an inference may be a judgment and a judgment an inference, his basic contention that overlapping of the species of a genus is what distinguishes philosophical from scientific concepts would not thereby in the least be established. To establish it, he would need to show not only that judgment and inference overlap and are both of them species of the genus "thought," but in addition that they are *coördinate* species of it. For the overlapping of species of a genus that are not coördinate is a ubiquitous fact, in no way distinctive of philosophical concepts. Polygons and triangles, for instance, overlap, and both are species, although not coördinate species, of geometrical figures. Again, physicians and lawyers, or gardeners and chauffeurs, etc., overlap, and are species, although again not coördinate species, respectively, of professional men, servants, etc. Yet the concepts of geometrical figure, professional man, servant, etc. are not philosophical concepts.

[10] *Op. cit.*, p. 207.
[11] *Op. cit.*, p. 36.

Coördinateness of overlapping species of a genus is the only thing that would have been distinctive, or that was in any need of demonstration, and without it Mr. Collingwood's examples are only a waste of time. That he realizes this, and that the overlapping concepts he adduces as evidence (although almost everywhere referred to by him only, indefinitely, as species of a philosophical genus), are tacitly claimed by him to be in all cases coördinate species is indicated by at least one passage, where he says that when a concept is philosophical "the class of its instances overlaps those of its coördinate species."[12] Yet in none of the examples he adduces to prove that overlapping of the species of a genus is what distinguishes philosophical from scientific concepts does Mr. Collingwood even attempt to show that the species he mentions are coördinate.

That they are not coördinate automatically follows from the fact that they overlap. But if Mr. Collingwood did not claim them to be coördinate, their overlapping, as already pointed out, could not then be claimed to be something distinctive of philosophical concepts. Mutually partial overlapping of two species of a genus (vs., total overlap of one by the other) is a character which is, indeed, absent from classifications that are scientific in form (whether their subject-matter be philosophical or natural). But *presence* of that character is not something distinctive of any particular kind of concepts. Presence of it is only a logical defect to which is exposed *any purely empirical classification.* And it constitutes a logical defect—whether the subject-matter be philosophical or not—because knowledge that two concepts partially overlap furnishes no basis for conclusions concerning either the things that are, or those that are not, cases of one of them.

That the examples given by Mr. Collingwood contribute exactly nothing to prove his basic contention, and that the basic contention is false either as matter of observable fact, or else because it implies a contradiction, may be made still more evident by examination of another of his cases, from the field of ethics. He writes: "Actions are commonly divided into classes according as they are done from motives of different kinds: desire, self-interest, duty. . . . If it could be held that acts done from these different motives fall into separate and mutually exclusive classes, this would greatly ease the task of assigning to each act its true moral worth. But . . . moral philosophers have always recognized that in fact our motives are often mixed, so that one and the same act may fall into two or even into all three classes. These and similar considerations make it clear that in our ordinary thought about moral questions, whether we call this thought philosophy or common sense, we habitually think in

[12] *Op. cit.*, p. 35.

terms of concepts whose specific classes, instead of excluding one another, overlap.[13]

Now it is perfectly true that we may pick from the class of actions those where desire is a motive, those where self-interest is a motive, those where duty is a motive. It is also true that these classes of actions overlap. And it is also true that literary language, and indeed logical language as well, would refer to each of these classes as a species of actions. But the only question that has any bearing here on Mr. Collingwood's basic contention is whether they are *coördinate* species of actions. As to this, literary language tells us nothing, for "coördinate species" is a technical term belonging to logic. Logic, however, tells us that when *three* principles of division at once are used, the number of *coördinate* species thereby generated is eight. They would here be:
Actions done from desire, self-interest, and duty.
Actions done from desire, and self-interest, but not from duty.
Actions done from desire, but not from self-interest, or from duty.
Etc.

Indeed, by introducing degrees of each of the three motives (assuming them to be measurable), we could divide the class of actions into a much larger number of coördinate species, but those species still would not overlap. They would on the contrary be mutually exclusive and together exhaustive of the class of actions, *for otherwise they would not be coördinate.* Or has Mr. Collingwood, perhaps, a definition of his own, other than the ordinary one, for coördinateness? If he has, it is to be regretted that he did not introduce it even in despite of his own taboo of formal definitions in philosophy. For so long as we adhere to the ordinary meaning of terms, the contention that the coördinate species of a philosophical genus overlap is simply the contention that the coördinate species of a philosophical genus are not coördinate! And rejection of a contention which essentially consists of this contradiction does not, as he claims, in the least commit us to "throw overboard the whole conception of genus and species";[14] nor does it involve us in "thinking that every concept must have a group of instances to itself."[15] Nor, again, does our division above of actions into mutually exclusive, coördinate species on the basis of the three determining motives he mentions, in any way entail that we "must give up thinking at all about" that particular topic of ethical philosophy.[16] On the contrary, it enables us to think about it without confusion.

[13] *Op. cit.*, pp. 42–43.
[14] *Op. cit.*, p. 37.
[15] *Op. cit.*, p. 48.
[16] *Op. cit.*, p. 44.

The very foundation of Mr. Collingwood's entire theory of philosophical method is now seen to consist either of the sharp contradiction just noticed, or of the false proposition that overlapping of non-coördinate species of a genus is something to be found only in philosophy. This means that the whole ingenious edifice erected by him on that foundation collapses; and the case against him might therefore be rested here. Since, however, falsity of premises does not necessarily imply falsity of conclusion, the methodological principles with which he concludes might nevertheless happen to be sound. An *a posteriori* test of this, however, is provided by the sort of fruits those principles bear throughout Mr. Collingwood's essay, for his own obedience to them is unquestionably faithful.

The vice now pointed out in his basic contention is the first and most remarkable of those fruits, and it is directly traceable to the refusal to be precise which Mr. Collingwood regards as a requisite of literary quality, and to the consequent ambiguity of language, which he dignifies by the names of expressiveness and flexibility. Other fruits of the same sort are to be found at many other points. Let us first turn to Mr. Collingwood's contention that what distinguishes the scale of forms constituted by the species of a philosophical genus is that the differences of degree on which a philosophical scale is based are essentially non-measurable.

In the course of his attempt to show this, he considers the objection that those differences of degree must be in principle measurable because "whatever exceeds another thing must exceed it by a definite and therefore measurable amount." And the point to notice is that Mr. Collingwood meets this objection by pointing out that there are things which differ in degree, e.g., feelings of warmth, and which nevertheless can not be *added together* in order to produce a greater. This reply evidently assumes that measurability implies addibility.

Now it may well be the case that for purely literary purposes the two terms are equivalent, but the fact nevertheless is that non-addible quantities are often measurable, and therefore that non-addibility, whether of "philosophical" or any other degrees, is quite irrelevant to the contention that they are non-measurable. An example of non-addible quantities which are measurable is that of temperatures. They are measurable, and universally measured, by means of a thermometer, but, although the *figures* which measure the temperatures of two rooms, say 60 and 70, can be added, the temperatures themselves can not in any way be added to yield a third actual temperature the measure of which would be 130 degrees. Moreover, although temperatures are non-addible, they are physical and not "philosophical" quantities.

As concerns Mr. Collingwood's own example, viz., feelings of warmth, their non-measurability is not, as he assumes, an implication of their non-addibility, but is due only to the empirical difficulty of *correlating them with some fixed scale,* whether one consisting of some of them (as the scale for measuring hardness consists of the hardnesses of various things) or one consisting of something else (as the scale for measuring temperatures consists of heights of mercury). And Mr. Collingwood's other assertion, that observation of the intensity of some bodily function that happened to vary concomitantly with the intensity of pleasure (or, similarly, of the feeling of warmth) would not constitute measurement of it, is explicable only as based on the assumption that the scale used to measure something needs to be homogeneous with (instead of only correlated with) the thing measured. The falsity of that assumption is sufficiently shown by the fact that temperatures are admittedly measured by heights of mercury, which are nevertheless something heterogeneous to them.

From these considerations, it is evident that non-measurability in observable things is always only an empirical and provisional, never an intrinsic character, and that it can not, therefore, be distinctive of "philosophical" differences of degree.

Let us next turn to Mr. Collingwood's contention that in "philosophical" scales of forms differences of kind are, not correlated with, but somehow "fused" or identical with differences of degree. None of the examples by which he attempts to establish the existence of differences of this sort in fact illustrates any such thing, and any appearance they may have of doing so is due only to the lack of precision in statement which Mr. Collingwood would have us regard as a philosophical virtue.

The fact he mentions, for instance, that the feeling of warmth at a given intensity is pleasant, at another dully painful, and at another sharply painful does not mean, as Mr. Collingwood asserts, that every increase in the heat I feel *is* (vs., is merely accompanied by) a change in the kind of feeling I experience. For to say that at any intensity the feeling of warmth becomes different in kind from itself would be to say that the intensity at which this occurs is an intensity, not of the feeling of warmth, but of some other. That the feeling of warmth at certain intensities is accompanied by pleasure and at other intensities by pain shows that *other feelings,* connected with the feeling of warmth, change at certain intensities of the feeling of warmth, but it does not in the least show that the feeling of warmth itself, at any intensity, becomes qualitatively different from itself; nor, as Mr. Collingwood would have us believe, that at slight intensities it is only slightly of its own kind!

The case with the allegedly "philosophical" feeling of warmth is thus in no relevant respect different from the case with, let us say, the physical substance "iron" which, no matter at what temperature, or at what pressure, etc., completely remains iron notwithstanding the diversity of the attributes it exhibits at various temperatures, pressures, etc.

And nowhere, in spite of all his efforts, does Mr. Collingwood give any evidence whatever that the species of a genus (whether coördinate or not), may be species of it in various degrees. What is possible—and, if stated with sufficient lack of precision might be mistaken for this—is that the individual things which belong to a given species of a genus should possess the generic character only in a degree *too small for some stated purpose.* But that degree is never too small, if greater than zero, for the purpose of insuring that the things of the given species belong as fully as any others to its genus. In the case of academic degrees, for instance, which Mr. Collingwood offers as an example, it would obviously be false to say that the lowest, viz., the bachelor's, is only slightly an academic degree. What is true is that the degree of scholarly equipment (not of academic-degree-ness) which this species of academic degrees represents is lower than that represented by the other degrees, and is possibly too low for certain purposes.

Let us finally consider Mr. Collingwood's contention that, in philosophical concepts, distinction and opposition are "fused into a single relation." One example he uses is that of the feeling of cold and the distinct yet allegedly opposed feeling of warmth. Yet he not only fails to show that the feeling of warmth and of cold are "opposed" to each other, but he even omits to say what would constitute opposition of the "philosophical" sort, as distinguished from the "non-philosophical" relation "subsisting between a positive term and its own mere negation or absence." He merely asserts that the two feelings, although not opposed in this sense, are yet "opposed." The fact is, however, that the feeling of warmth and the feeling of cold are opposed only each to its own psychological zero. This zero happens, for both, to correspond to a physical temperature about that of the blood, and therefore when a temperature (moderately) higher or lower than this is applied to one *area* of the skin, only one of the two feelings can be experienced: if one is, the other ceases to be, and vice versa. But that the two feelings are nevertheless not opposed to each other is shown by the fact that if one of the cutaneous organs for warmth and one of those for cold are stimulated together, both feelings are experienced together. The things that are mutually exclusive and lie on *one* scale

of opposition instead of two are not the two feelings, but the physical temperatures that serve as stimuli to each.

What perhaps leads Mr. Collingwood to believe that there is opposition of a sort other than opposition to a zero is the sort of situation we should have in a case where two things each capable of existing in various degrees, happened to be, on the one hand, *distinct* in the sense that no contradiction was involved in the supposition that either should exist, or not exist, whether the other did or not; and, on the other hand, that, although each is *opposed* only to its own zero, yet the zero of each always in fact turns out to coexist with the maximum of the other (and analogously for the other degrees). No examples of two such things occur to me, but I venture to say that if any exist, they are to be found in the realms of science rather than of philosophy. At all events examples of such a relation would not illustrate a "fusion" of distinctness and opposition nor a new sense of either of these terms.

Many others of Mr. Collingwood's contentions testify no less eloquently than those already considered how unfailingly fatal in philosophical investigations is a method which, in no matter what eulogistic terms described, essentially consists of a systematic refusal to be precise whenever precision would require of the reader some effort of attention, and would thus interfere with his literary enjoyment of what he reads. The examples already given, however, will suffice;[17] and we shall conclude with a brief attempt to account for such *prima facie* plausibility as Mr. Collingwood's methodological counsels may have. Three easy confusions account for it much more adequately than does the elaborately unsound structure erected *ad hoc* by him. One of these confusions concerns the essential business of philosophy; another, the functions of two sorts of literature; and the third, the nature of technical terms. Let us turn to the first.

Mr. Collingwood, rightly, never doubts that the imposing systems constructed in the past by the great philosophers are achievements of high human value. What he seems to me to neglect, however, is that what these philosophers were striving to reach was knowledge, properly so called, concerning the matters they considered; that they very largely failed in this; and that the high value their constructions nevertheless have had is of a kind other than knowledge. The value they have had, namely, has been value as articles for possibly helpful faiths, or as more or less fanciful pic-

[17] The merits of Mr. Collingwood's view that philosophical propositions are essentially "categorical" are devastatingly discussed by Mr. Gilbert Ryle in a recent article entitled "Mr. Collingwood and the Ontological Argument," *Mind*, April, 1935.

tures, representing possibly beautiful or reasonable worlds, that could serve as pleasant imaginative escapes from facts too often tragically stupid. This is to say that philosophy, in spite of the failure for the most part of its own search for knowledge, has been a good deal of a success in the eyes of persons who took it as non-revealed religion or as poetic fiction. This, I suspect, is how Mr. Collingwood really takes philosophy, and for success of this sort, a "literary" as contrasted with a precise use of words is not only permissible but of great aid; while any errors or confusion that may result from it hinder little or not at all.

This brings us to literature. The eulogistic connotation of the word "literary" evidently compels us to reject any suggestion that philosophy should use words in an unliterary manner. And this makes the assertion that it should use them in a literary manner plausible without regard to its ambiguity. But if by that assertion is meant that in the search for philosophical truth we should use words in the manner appropriate to "literary" purposes, then the assertion ceases to be plausible as soon as we realize that literary purposes are such things as esthetic enjoyment, imaginative stimulation, and expression of feelings, moods, and attitudes; for these purposes, although quite as worthy as any, are yet quite other than that of discovering truth. What the latter requires is a use of words which, instead of being literary in the sense just stated, is on the contrary *rational* in the sense that it makes dependable reasonings possible. And this means a use of words which is consistent, unambiguous, and precise even at the cost of whatever technicality the occasion may demand. This is what constitutes a literary use of words in literature which, like philosophical and scientific literature, essentially aims to be not poetic, dramatic, imaginative, or biographical, but heuristic. And with this we come to technical terms.

Whenever, in any field, knowledge beyond what is common begins to be won, the introduction of technical terms quickly becomes indispensable, for technical terms, far from being as Mr. Collingwood asserts arbitrary innovations in vocabulary created by verbal definitions, on the contrary represent, in highly compressed form, genuine knowledge previously won, or a hypothesis about to be tested. And therefore, as Whewell has abundantly shown, technical terms are the products of, or the programs for, always "real" and never merely "verbal" definitions. For merely verbal definitions create, not a technical terminology, but only a jargon—a new, esoteric language into which, for the convenience of condensation, it is sometimes desirable to translate portions of the old, but mere translation into which constitutes no addition to knowledge.

A technical term, on the contrary, aims to embody an addition to knowledge, i.e., to be the name of something real: of a theory that has been or can be verified, of a distinction corresponding to a difference that exists, etc. And Mr. Collingwood's assertion that in philosophy we only come to know better what we already to some extent knew before is true only in the sense in which it is true that in theoretical physics we only come to know better the nature, already to some extent known to us, of the material objects around us. Such a situation, thus, is in no way peculiar to philosophy. Rather, it is of the very essence of *analysis,* no matter of what. And that it does not relieve us of the need of technical terms is made evident enough by the case of physics. The reason why it does not relieve us of that need is that analysis—although indeed only making us know better what we in a way already knew—is often itself possible only in terms of entities (whether physical or logical), which—although they were existent or subsistent all along—are nevertheless completely novel to us, and therefore call for novel names exactly as do newly discovered chemical elements or prehistoric animals.

An empirical test of the validity of given methodological precepts, whether for philosophy or anything else, is, I submit, that any errors committed in practice should be traceable to violations of those precepts. But the errors which, as I have endeavored to show, pervade Mr. Collingwood's essay seem on the contrary in most cases to be directly traceable to the faithfulness with which he obeys the methodological precepts he sets forth.

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BOOK REVIEWS

The Problem of Knowledge in Scottish Philosophy (Reid-Stewart-Hamilton-Ferrier). TORGNY T. SEGERSTEDT. (Lunds Universitets Årsskrift. N. F. Avd. 1, Bd. 31, Nr. 6.) Lund: C. W. K. Gleerup. 1935. 157 pp.

This study, quite fluent in its mastery of English but full of faulty typography, comes to us from Sweden. It treats of the four Scotch philosophers whose names appear on the title page, with an historical introduction on the sources of Reid and with appendices on two Cambridge professors, Whewell and John Grote, who are regarded as under the influence respectively of Hamilton and Ferrier.

Reid, so the argument goes, owed an empirical strain to the three major British empiricists, even while revolting from the conclusions

to which he regarded Hume as carrying out the principles of the school. He owed a rationalistic strain to the Cambridge Platonists whose influence, coming through Price, furnished him with a weapon to combat Hume. These two strains led naturally to the dualism of external world and mind. Then, in order to escape the sceptical implications of this dualism, he sought to defend a doctrine of immediate knowledge and of innate or "original" ideas. Stewart, an elegant writer but not a profound thinker, started the Scottish School on its decline. Baffled by the problem of why our "original" ideas hold of the external world and almost untouched by influence from Kant, he maintained that our knowledge is of phenomena but not of substance itself. Hamilton, greatly affected by Kant, developed Stewart's distinction into his doctrine of the Unconditioned which carried Reid's dualism to an extreme position but ignored Reid's theory of knowledge as immediate and substituted therefor a theory of knowledge as relative. Ferrier, full of admiration for Hegel as well as Kant (even if professing inability to understand Hegel), returned to Reid's theory of immediate knowledge and hence rejected entirely the dualism of the Scotch School and put epistemology into a position of priority to ontology.

The Cambridge professors, even if dependent upon the work of the Scotch School, were not followers of its teachings. Whewell tended towards idealism in his claim that the mind is active in the creation of facts and finds the test of truth in coherence. And John Grote, by introducing the idea of degrees of truth and levels of knowledge, indicates that the development of the Scottish philosophy is ended and a new line of development is beginning.

The detail of the argument is excellently worked out and deserves the attention of students.

S. P. L.

Collected Papers of Charles Sanders Peirce. Edited by CHARLES HARTSHORNE and PAUL WEISS. Vol. VI, Scientific Metaphysics. Cambridge: Harvard University Press. 1935. Pp. x + 462. $5.00.

Students of Peirce's writings who hope to find in the present volume a carefully worked out metaphysics will be disappointed by its contents. Most of the papers included in it appeared in Peirce's life-time, and while some of the hitherto unpublished material helps fill out lacunæ, on the whole there is little in the volume which was not known before. Like the preceding volumes in this edition the present one is a curious mixture of grandiose cosmological speculation and penetrating analyses upon a variety of topics.

The volume begins bravely enough with a program for meta-

physics of studying the most general features of reality. Peirce claims that the objects of metaphysical inquiry are open to observation in the same sense that the objects of science are, and he attributes the backward condition of metaphysics to the fact that its leading professors have been theologians. It is perhaps this program and this claim that led the editors to choose the title of "Scientific Metaphysics" for the volume. However, while Peirce has many important things to say about the generic features of reality in his discussion of the categories, it is a Schellingian outlook which characterizes most of the volume. Peirce declares that "metaphysics has to account for the whole universe of being. It has, therefore, to do something like supposing a state of things in which that universe did not exist, and consider how it could have arisen." There follows the familiar tychistic-agapastic-synechism. Since Peirce believes that it is regularity which requires explanation, he tries to exhibit it as the product of evolution from the chance elements in the universe. His conclusion is that the only intelligible theory of nature is a form of objective idealism, according to which matter is effete mind, the habits of the latter becoming physical laws. An interesting feature in this cosmogeny is that not only the actual universe but also the Platonic realm of forms is evolutionary in origin.

The best things in the volume, to my mind, are the specific analyses Peirce makes of such ideas as necessity, chance, space, time, infinity, and continuity, and the additional light that is thrown on his views on probability and the nature of science. In his discussion of continuity, Peirce occasionally approaches the standpoint of contemporary intuitionism, although he does not work out the implications of his views. However, even in his analyses Peirce is dominated by his evolutionary cosmology, not always in the interest of clarity or cogency. Thus, while Peirce did yeoman service in pointing out the contingent factors in the laws of science, he seems to me to obscure the issues when he transforms "chance" into a substantial *agent*. And while his attack on necessitarianism is impressive, I do not find that he offers any respectable evidence for his view that the "order of nature" is changing, or that these changes are brought about through the operation of a primordial "mind." Again, his ideas on space and time, when I can understand them, seem to me very naïve; and his conclusion that legal corporations have a "real" personality illustrates the tricks that words will play upon minds that should know better.

It is to be hoped that the remaining volumes of the *Collected Papers* will be published in short order. But enough of Peirce's work has now appeared to suggest the conclusion that a consistent

system of ideas can not be forced upon him. He said different and incompatible things at different times, and there seems no way of reconciling his periods of forthright naturalism with the anthropomorphic idealism of other portions of his writings. Peirce characterized himself justly when he declared that he was "a mere table of contents, so abstract, a very snarl of twine."

E. N.

American Philosophy Today and Tomorrow. Edited by HORACE M. KALLEN and SIDNEY HOOK. New York: Lee Furman, Inc. 1935. viii + 518 pp. $3.75.

No brief notice can give much of an idea of the richness of this collection of essays by twenty-five "representative living American thinkers," nearly all of them belonging to the younger generation of teachers of philosophy, and about one-half of them having had, at one time or another, appointments at universities located in New York City. Although the editors' foreword conveys the impression that each contributor has written an intimate self-portrait or *credo* concerning "his personal vision of today's philosophic problem and tomorrow's philosophic solution," the essays are actually of many kinds and degrees of intimacy. Each symposiast has written a useful autobiographical sketch to preface his contribution, but the only outspoken self-revelations are contained in the essays by Messrs. Costello, Durant, Hook, Kallen, Morgan, Murphy, Randall, Smith, and Williams. These authors, by comparison with those who wrote the more formal essays comprising the other two-thirds of the book, have the advantage in literary and personal charm, but counterbalancing disadvantages when it comes to closely-reasoned arguments.

If the book has a central pattern (and if certain minority reports are temporarily disregarded it undoubtedly has one), the best single label available is probably the word "naturalism," which occurs in the titles of four of the essays, and which roughly describes the temper of the majority of the others as well. The American philosophers now coming to maturity are also, if this collection is representative, modest in their philosophical pretensions, strongly tinged with scepticism and relativism, impatient with inherited dialectical difficulties, and deeply concerned about pressing social and political problems, but not in any ultimate sense. As one of the editors expresses it, the social problem is "the most important, and at the same time philosophically the least interesting, of all problems. It should be solved in order that mankind may devote itself to art, science and pure philosophy. . . ." Mr. Schneider compresses much the same wisdom into his statements: "The happier

the society, the less concern there is for the *res publica.* It does not follow that the less concern there is for the *res publica,* the happier the society. It merely follows that the fewer freemen are needed to administer the *res publica,* the more men can be free."

If the book contained an index of names, which it does not, it is safe to say that the page-references to John Dewey and George Santayana would lead all the rest, a notable tribute to both of these "elder statesmen" of American philosophy. There are exceptions, of course, to nearly all the above generalizations: Messrs. Bates, F. S. Cohen, Durant, Morgan, and Williams have been active in non-academic fields; Mr. Williams also speaks for Roman Catholicism, Mr. Flewelling for Personalism; while Mr. Sheldon and a number of others are inclined to argue some of the traditional metaphysical and epistemological issues. But the prevailing tone of the book can be gathered swiftly by reading the two essays written by its editors.

One is impressed repeatedly by the sincerity and good humor of most of the contributors; and by the fact that several of the younger philosophers write extremely well. A harsh critic might complain that programs are more numerous than conclusions, and that there are occasional outbursts of impressionism suggesting lack of discipline; but those are the faults of youth. There is an almost unanimous willingness to learn from others and to begin one's reflection with the straightening out of immediate human perplexities that bodes well for the "tomorrow" of the book's ambitious title. In short, this collection forms a valuable supplement to the two volumes of what the editors call "pre-depression philosophy" edited by Adams and Montague, and the other coöperative books. To anyone who would understand the temper of contemporary American philosophy, especially in the Manhattan sector, this is an indispensable book.

H. A. L.

OTHER NEW BOOKS AND JOURNALS

René Guisan. In memoriam. *Revue de Théologie et de Philosophie,* No. 92. Lausanne: Switzerland. 1934. 117 pp. (René Guisan, in memoriam: *Arnold Reymond.* Y a-t-il deux exégeses: *René Guisan.* Le secret messianique: *Réne Guisan.* Charles Secrétan et l'église: *René Guisan.* La notion protestante de la sainteté: *René Guisan.*)

Philosophy of Science. Vol. 3, No. 1. A Metaphysics of Design with Purpose: *M. H. Moore.* On Space and Time as Attributes of Nature and Forms of Experience: *Arthur Lapan.* Things and Potentiality: *D. L. Miller.* Organismic Logic in the History of

Science: *R. H. Wheeler.* A Note on Parsimony: *E. J. Nelson.* Postulational Methods. II: *L. O. Kattsoff.* Psychology: The Propaedeutic Science: *S. S. Stevens.* Evolution and the Rise of the Scientific Spirit in America: *Sidney Ratner.* Discussion (Correspondence): The Law of Transitivity.

THE AUSTRALASIAN JOURNAL OF PSYCHOLOGY AND PHILOSOPHY. Vol. XIII, No. 4. Design: *John Anderson.* The Category of Causation in Psychology: *G. F. McIntosh.* The Nature of Intelligence: *J. A. Passmore.* A Study in Probability: *D. Taylor.*

THE PHILOSOPHER. Vol. XIV, No. 1. The Value of the History of Science. Philosophy and Education: *R. C. Lodge.* The Claims of Determinism: *C. E. M. Joad.* Providence and Free-Will: *Blythe Wade.* The Paris Congress of Scientific Philosophy: *L. S. Stebbing.* The Dual Ideal of Form in Art: *M. H. Jellett.*

REVUE DE METAPHYSIQUE ET DE MORALE. 43e Année, No. 1. La poésie et la littérature: *B. Croce.* La description mathématique des faits biologiques: *G. Teissier.* Le problème de la connaissance et les durées: *J. Ghéréa.* Le congrès international de philosophie des sciences: *A. Lautman.*

BULLETIN DE LA SOCIÉTÉ FRANÇAISE DE PHILOSOPHIE. 35e Année, No. 1. La méthodologie scientifique de l'investigation des faits de la nature et des faits de l'activité humaine. Exposé: *G. Hostelet.* Discussion: *M. Dorolle, A. Lalande.* Lettre de *R. Lenoir.*

LA CRITICA. Anno XXXIV, fasc. 1. La vita della poesia: *Benedetto Croce.* Cattolicismo e civiltà moderna nel secolo XIX: *Adolfo Omodeo.*

BLÄTTER FÜR DEUTSCHE PHILOSOPHIE. 9 Band, Heft 4. Das politische als Problem der Philosophie: *Hans Freyer.* Nietzsches Beweise für seine Lehre von der ewigen Wiederkunft: *Oskar Becker.* Sprache, Mundart und Jargon: *Hans Lipps.* Die logische Funktion der Sprache: *Wilhelm Grebe.* Elisabeth Förster-Nietzsche: *C. U. Emge.*

ZEITSCHRIFT FÜR ASTHETIK UND ALLGEMEINE KUNSTWISSENSCHAFT. XXX. Band, 1. Heft. Das Kunstwerk als Quelle kunsttheoretischer Einsichten: *René König.* Karl Philipp Moritz und Goethes "Werther": *Hermann Blumenthal.*

SOPHIA. Anno III, No. 2. Le néo-realisme bergsonien-thomiste (suite et fin): *M. M. Gorge.* L'oroscopo delle religioni: Pietro d'Abano e Pietro Pompanazzi: *Erminio Troilo.* La classificazione stoica delle passioni nelle "Tusculanae" di Cicerone: *Riccardo Micelo.* I fondamenti della logica formale pura nella "Wissenschaftslehre" di B. Bolzano e nelle "Logische Untersuchungen" di E. Husserl: *Giulio Preti.*

SCIENTIA. Vol. LIX, N. CCLXXXV–1. Quelques réflexions sur l'histoire de la science: *E. Cavaignac.* Die Bestimmung der Bahnen der Kleinen Planeten: *G. Stracke.* The Block Structure of the Earth's Crust: *N. Miyabe.* Réflexes neuro-endocriniens extéroceptifs: *R. Collin.* Dalla probabilità matematica alla realtà statistica: *F. Virgilii.*

NOTES AND NEWS

A Program of Fellowship intended to aid in the establishment of a Southwestern Philosophical Association was held, December 27 and 28, 1935, at Southern Methodist University, Dallas, Texas. On December 28 those present at the organizing meeting formed the Southwestern Philosophical Association. Professor R. W. Nelson, of Phillips University, was elected president and Dr. Archie J. Bahm, of Texas Technological College, was elected Secretary-Treasurer. Professor A. Q. Sartain and Professor C. M. Perry were appointed the executive locating committee, and Professor Gustav Mueller was appointed chairman of the publications committee.

The first annual meeting of the new association will be held during the Christmas holidays of 1936.

The program given at the Fellowship meeting included the following papers:

The Impact of Science on Modern Culture ..... *Charles E. Cory*
(Washington University)

How We Know ..... *Ralph W. Nelson*
(Phillips University)

Platonic Love ..... *Gustav Mueller*
(University of Oklahoma)

Music as a Form of Pure Activity ..... *C. B. Minner*
(Oklahoma School for the Blind)

Warner Fite's "The Platonic Legend" ..... *E. W. McDiarmid*
(Texas Christian University)

SYMPOSIUM: What is Philosophy?

What is Philosophy? The Scholastic View ..... *Regis H. Riter*
(St. Edward's University)

What is Philosophy? A Synthetic Description ..... *A. J. Bahm*
(Texas Technological College)

Philosophy and Present Social Needs ..... *Charles M. Perry*
(University of Oklahoma)